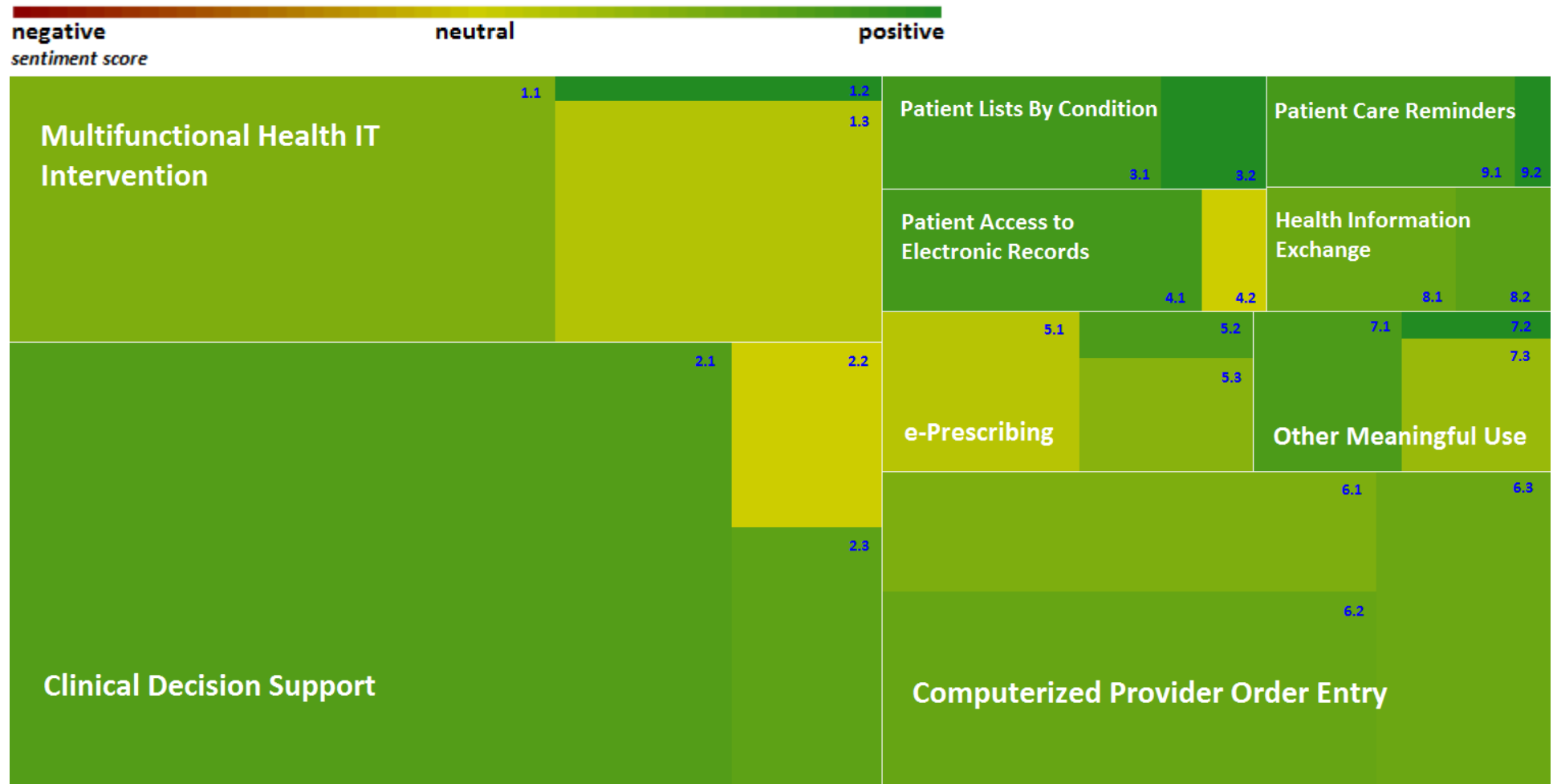# Health IT Quick-Stat # 14

Effects of Meaningful Use Functionalities on Health Care Quality, Safety and Efficiency

Systematic Review of Literature from 2010 – 2013

negative — neutral — positive
sentiment score

Multifunctional Health IT Intervention — 1.1 / 1.2 / 1.3

Patient Lists By Condition — 3.1 / 3.2

Patient Care Reminders — 9.1 / 9.2

Patient Access to Electronic Records — 4.1 / 4.2

Health Information Exchange — 8.1 / 8.2

Clinical Decision Support — 2.1 / 2.2 / 2.3

e-Prescribing — 5.1 / 5.2 / 5.3

Other Meaningful Use — 7.1 / 7.2 / 7.3

Computerized Provider Order Entry — 6.1 / 6.2 / 6.3

See page 2 for detail covering the number of impacts and average author sentiment for each meaningful use functionality impact area.

Tree Map Data:

N = Number of MU impacts on aspect of care; Score = Average author sentiment of MU functionality impact on aspect of care

Multifaceted Health IT Intervention

1.1 Quality (N=37, Score=0.46)
1.2 Safety (N=2, Score=1.0)
1.3 Efficiency (N=20, Score=0.15)

Clinical Decision Support

2.1 Quality (N=82, Score=0.71)
2.2 Efficiency (N=7, Score=0.0)
2.3 Safety (N=10, Score=0.65)

Patient Lists By Condition

3.1 Quality (N=8, Score=0.81)
3.2 Efficiency (N=3, Score=1.0)

Patient Access to Electronic Records

4.1 Quality (N=10, Score=0.80)
4.2 Efficiency (N=2, Score=0.0)

E-Prescribing

5.1 Safety (N=8, Score=0.125)
5.2 Quality (N=2, Score=0.75)
5.3 Efficiency (N=5, Score=0.40)

Computerized Provider Order Entry

6.1 Quality (N=15, Score=0.47)
6.2 Safety (N=25, Score=0.60)
6.3 Efficiency (N=14, Score=0.57)

Other Meaningful Use

7.1 Quality (N=6, Score=0.75)
7.2 Safety (N=1, Score=1.0)
7.3 Efficiency (N=5, Score=0.30)

Health Information Exchange

8.1 Efficiency (N=6, Score=0.58)
8.3 Quality (N=3, Score=0.67)

Patient Care Reminders

9.1 Quality (N=7, Score=0.79)
9.2 Efficiency (N=1, Score=1.0)

Summary:

The 'Updated Systematic Review' reviews the January 2010 to August 2013 health IT literature to examine the effects of health IT across three aspects of care -- efficiency, quality, and safety. This report updates previous systematic reviews of the health IT literature, focusing specifically on identifying and summarizing the evidence related to the use of health IT as outlined in the Meaningful Use regulations.

Positive defined as health IT improved key aspects of care but none worse off; Mixed-positive defined as positive effects of health IT outweighed the negative effects; Neutral defined as health IT not associated with change in outcome; Negative defined as negative effects of health IT on outcome. Overall, the report reviews 236 titles with 279 unique impacts tabulated.

Source:

ONC analysis of: Jones, S.S.; Rudin, R.S.; Shekelle, P.G.; Shanman, R.; Timmer, M.; Motala, A.; Perry, T.R.; Health Information Technology: An Updated Systematic Review with a focus on Meaningful Use Functionalities (Prepared by Southern California Evidence Based Practice Center under Contract No. HHSP23337020T) ONC. Washington, D.C. February 2014.

Notes:

[1] Sentiment ratings reflect author(s)' conclusions of the impact of the Meaningful Use functionality on the relevant aspect of care (i.e., efficiency, quality, and safety.)

[2] Other Meaningful Use Functionalities: Barcode Medication Administration, Clinical Lab Test Results, Electronic Immunization Registries, Medication Lists, Patient Specific Education, Problem Lists, and Summary of Care Records

[3] The articles depicted by the visualization and table above can be further explored through a Google Scholor profile dedicated to this review. http://scholar.google.com/citations?user=jB07CPsAAAAJ&hl=en

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